

Industrial Pretreatment Quarterly

Published for industrial dischargers by the King County Industrial Waste Program (KCIW)



King County

Department of
Natural Resources and Parks
Wastewater Treatment Division
Industrial Waste Program

Volume XXXIV: Issue 2 Summer 2008

Mission Statement

The mission of the Industrial Waste Program is to protect the environment, public health, biosolids quality, and King County's regional sewerage systems. We work cooperatively with our customers as we regulate industrial discharges, provide technical assistance, and monitor the regional sewerage system.

Industrial Waste Advisory Committee

Christopher Arfman, Skills, Inc.
Kevin Burrell, Environmental Coalition of South Seattle (ECOSS)
Ken Falcone, Cargill, Inc.
Dan Flick, Ralcorp Frozen Foods/
Bakery Chef
Ken Gross, GM Nameplate
Donna Hoskins, Bayer HealthCare
Bill Hughes, Bellevue Community College
Mark LaFata, Aerojet-General
Jed Rusyniak, Coca-Cola Co.
Steve Simacek, Hytek Finishes
Heather Trim, People for Puget Sound
Doris Turner, Boeing Commercial Airplane Group - Renton
Chris VanHoof, City of Kent
Scott Woerman, Landau Associates

2007 KCIW Rewards and Recognition Program

(Awarded in 2008 and listed here throughout that year)

Commitment-to-Compliance Award

Avtech Corp.
BP Products North America
Boeing Commercial Airplane - Renton
Glacier Northwest Inc. - Kenmore

2007 Gold Awards

Awarded in 2008 and listed here throughout the year

Acu-Line Corp.
Aero Controls Inc. - 20th Street NW
Alaskan Copper Works - 6th Avenue



What to expect during an inspection

Performing compliance inspections on a regular basis is an important part of KCIW's mission (see left) to work cooperatively with its customers. King County's code requires that the program perform an annual inspection with all industrial wastewater dischargers that have permits. The program inspects those with discharge authorizations a minimum of every five years.

The frequency of both scheduled and unannounced inspections depends on many factors - the industrial user's potential impact on the county's treatment plants, the volume of wastewater the facility discharges daily and a company's history of compliance. KCIW does inspections for many reasons. (See page 4.)

When a KCIW compliance investigator comes to a facility to perform an inspection, he or she will inform the company's representative of the purpose, type and scope of the inspection. The main areas that will be inspected are the process areas, the pretreatment system and chemical and waste storage areas. (See page 4.) In addition, the investigator will review records for self-monitoring laboratory analysis and hazardous waste management.

At the end of the inspection, the investigator will review the results with the company's representative - pointing out any deficiencies and things that they are doing well, and answering any questions. If conditions at the facility require specific actions, the investigator will send a written follow-up notification

(Continued on page 4)



KCIW staff did more than 400 inspections in 2007.

(Continued on page 2)

King County Industrial Waste Program

<http://dnr.metrokc.gov/wlr/indwaste>



Public Rule adoption

The 45-day public comment period on KCIW's notice of intent to adopt Public Rules and revise King County Code 28.84.060 ended on March 24. The program also held public hearings on March 4 and March 13. During this time the program received four comments.

The program is in the process of adopting Public Rules pertaining to Industrial Waste Local Discharge Limits, the Industrial Waste Enforcement Response Plan, and Discharging Hauled Waste at a King County Publicly Owned Treatment Works (POTW)

Treatment Plant. We are proposing these changes so that King County will comply with the changes required by the federal streamlining amendments in 40 CFR Parts 9, 122, and 403 (October 14, 2005). In addition, the program is proposing several changes to clarify or enhance King County's existing regulations and to acknowledge other changes in federal requirements.

Following adoption of the Public Rules, revisions to King County Code 28.84.060. will be placed before the Metropolitan King County Council. There will be a formal public hearing when the Council reviews the revisions for adoption into the Code, projected for 2009.

For more information go to: <http://dnr.metrokc.gov/wlr/indwaste/useful.htm>, contact KCIW Compliance Investigator Jim Sifford by e-mail: jim.sifford@kingcounty.gov or call 206-263-3008.

Seeking Advisory Committee Member

IWAC's goal is to help KCIW protect the environment, public health, biosolids quality and King County's regional sewage system. KCIW's

Industrial Waste Advisory Committee (IWAC) is looking for a new member from the food processing industry.



(Continued on page 3)

(AWARDS-Continued from page 1)

Amgen Corp. - Bothell
A. O. Smith Water Products Co.
Avtech Corp.
BP Products North America
Ball Metal Beverage Container Corp.
Bayer HealthCare - Bothell
Bayer HealthCare - Seattle
Bayer HealthCare - Lynnwood
Boeing Commercial Airplane - North Field
Boeing Commercial Airplane - Renton
Carl Zapffe Inc.
Container Properties, LLC
Dawn Food Products Inc.
Exotic Metals Forming Co.
Express Finishing
Genie Industries - Bldg. 2 - Moosewerks Plant
Glacier Northwest Inc. - Kenmore
GM Nameplate Inc.
Hexcel Corp.
Honeywell International Inc.
Hytek Finishes Co.
Industrial Container Services
Interstate Brands Corp. - Hostess
Kenworth Truck Co.
King County Solid Waste Division- Cedar Hills Landfill
King County Wastewater Treatment Division - Brightwater Conveyance System
Magnetic and Penetrant Services Co.
Mastercraft Metal Finishing Inc.
Metro Transit South Base/ Component Supply Center
Mikron Industries
Oberto Sausage Co. - Kent
Pacific Iron and Metal
Pioneer Industries
Precor Inc. - Plant 1
Precor Inc. - Plant 2
Prototron Circuits Inc.
Quality Finishing Inc.
Rexam Beverage Can Co.
Safeway Inc. - Bellevue Beverage Plant
Seattle Barrel Co.
Seattle Solid Waste - Kent Highlands Landfill
Skills Inc. - Auburn Facility
Skills Inc. - Ballard Facility
Smith Fabrication Inc.
TOC Holdings Co.
Todd Pacific Shipyards Corp.



(Continued from page 2)

Tri-Way Industries
Universal Brass Inc.
Universal Manufacturing
Universal Sheet Metal Inc.
Vectra Fitness Inc.
Viox Corp.
Washington Technology Center
Weyerhaeuser Co.

2007 Silver Awards

Awarded in 2008 and listed here throughout the year

Aerojet-General Corp.
Amgen Corp. - Seattle
The Boeing Co. - Plant 2 Facility
Boeing Electronics Center
Burlington Environmental - Kent
Burlington Northern Santa Fe
Railway - Interbay Facility
Cedar Grove Composting Inc.
Circuit Services WorldWide
Coca-Cola Bottling Co. of
Washington
Crane-Eldec Corp. - Martha Lake
Facility
Davis Wire Corp.
G & K Services
Genie Industries - Bldgs. 3 & 4
King County Wastewater Treatment
Division - Brightwater Conveyance
System II
Marine Vacuum Service
Pepsi-Cola Co.
Redhook Brewing Co.
Romac Inc.
WestFarm Foods/Darigold - Rainier

Members have a voice in how the program operates as well the chance to exchange ideas with various wastewater dischargers, sewage agencies, environmental groups and KCIW staff. The committee meets three times per year, and normally does not require members' time other than for meetings. If interested, please send the following information by July 15:

- Name, title, company name, mailing address, e-mail address, and phone number
- Type of industry
- Reasons you would like to serve on the committee

Please e-mail to barbara.badger@kingcounty.gov or mail to Barbara Badger, Compliance Investigator, at KCIW (contact info page 3.) Please call with any questions. The next IWAC meeting is Nov. 5. Special accommodations can be arranged by request by calling 206-263-3000 or TTY: 711.



Watch for this icon for technical assistance tips

About the Industrial Pretreatment Quarterly

Published by the Industrial Waste Program, Wastewater Treatment Division, King County Department of Natural Resources and Parks

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Publication is available on the Internet at: <http://dnr.metrokc.gov/wlr/indwaste/publicat.htm>. For more information contact Doug Hilderbrand, KCIW Program Officer, at 206-263-3032 or TTY Relay: 711, or e-mail: douglas.hilderbrand@kingcounty.gov.

KCIW's Rewards and Recognition Program (above)

Every year, King County recognizes significant industrial users of the sewer system that have maintained an excellent record of compliance with the county's industrial waste discharge regulations for the previous calendar year. For awards criteria and more information, go to: <http://dnr.metrokc.gov/wlr/indwaste/Awards.htm>.

King County's industrial pretreatment regulations are designed to prevent businesses from discharging substances that can degrade the wastewater treatment process, harm workers, damage facilities or reduce water quality.

Contact information:

King County Industrial Waste Program (KCIW), 130 Nickerson St., STE 200, Seattle WA 98109-1658. PH: 206-263-3000 or TTY: 711.

<http://dnr.metrokc.gov/wlr/indwaste>

This material is provided in alternative formats upon request by calling 206-263-3000 or TTY relay: 711

How will you do on your next compliance inspection?

CONSIDER THESE ITEMS

(Intended as an overview only)

Process areas:

- Has proper care been taken to prevent spills, leaking tanks, floor spillage, dilution and problems with plumbing hoses or drains?

Pretreatment system:

- Is the system installed according to the approved engineering report?
- Is a knowledgeable operator present?
- Are pH meters operational and regularly calibrated?
- Is the pH alarm in working order?
- Is the clarifier clean of excess sludge?
- Are records properly maintained?
- Is sample site clean, accessible and well maintained?
- Are the chemical addition system, sludge press, solvent recovery/strippers and oil grease separators properly working and maintained?

In the chemical & waste storage areas:

- Is there proper containment to prevent spillage or illegal discharges to the sewer, groundwater or surface waters?
- Are storage drums properly labeled, segregated, stored and manifested?

Other items may be checked. Contact assigned KCIW compliance investigator with questions. (Contact information page 3.)

As well as doing periodic inspections required by the type of discharge approval, KCIW may do inspections:

- As a response to a facility's spill
- Due to complaints from the public or regulatory agencies
- As part of a post-violation investigation
- To evaluate compliance with enforcement actions
- To determine the type of discharge approval that KCIW will give the facility (permit, discharge authorization, etc.)
- To verify a submitted permit application and its pretreatment system information
- Before a facility discharges from a new source
- Before a facility uses a new pretreatment system
- To help develop/maintain a good working relationship between the investigator and the industrial user.

(Continued from page 1)

that may have compliance orders and deadlines associated with it. If warranted, other regulatory agencies may be notified.

The program is highly committed to being accessible to its customers, and inspections are a great time for a facility to ask its assigned KCIW compliance investigator questions or to get technical assistance.

If you have any questions regarding inspections, contact the program or facility's assigned KCIW compliance investigator. (Contact information, page 3.)

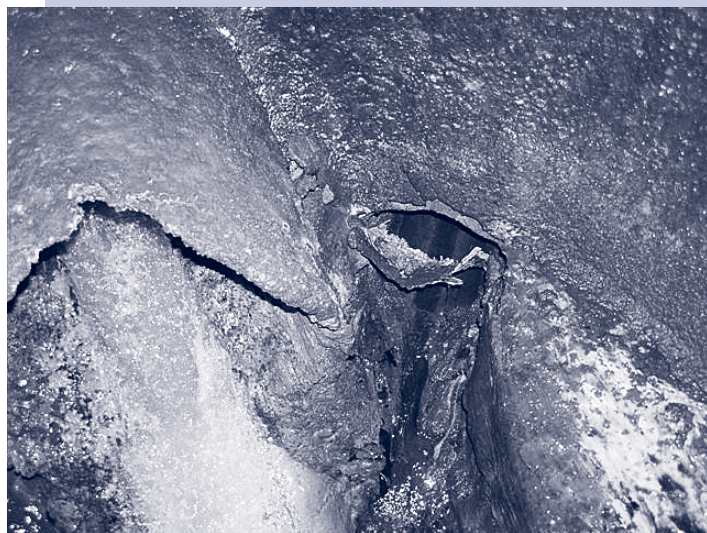


Industrial Pretreatment tip:

Use the appropriate chemicals for neutralizing acids and bases

In this issue, we focus on considerations for selecting a neutralizing agent. In future editions we will focus on downstream effects of the chemistry of the most commonly used agents to the sewer system, treatment plant process and the environment.

It is extremely important to understand neutralization chemicals - how to select, set up, use and downstream impacts. During KCIW's 39-year history, staff members have encountered many instances where wastewater dischargers have sent both acids (low pH) and bases (high pH) to the sewer with disastrous results. In several cases in the 1980's, acids have completely destroyed local sewers in the county, with replacement costs in the thousands of dollars. KCIW has also experienced several cases where large volumes of high pH (bases) material were released into the sewer, placing the county's treatment plants in peril.



Acid corrosion of sewer pipes can cause extensive damage.

When selecting a neutralizing agent, sulfuric acid and sodium hydroxide are the two most commonly used chemicals, although other acids such as nitric, hydrochloric or carbon dioxide also very common. For bases,

ammonium hydroxide or calcium hydroxide are also used.

Health and safety, cost and storage must be considered when selecting the agents most appropriate for any given system.

Health and Safety: Sulfuric acid reacts with water releasing heat (highly exothermic reaction) which could cause burns more serious than those of comparable strong acids. Hydrogen gas or a poisonous hydrogen cyanide gas is released when sulfuric acid reacts with metals or cyanide solutions respectively. Depending on the operation, a non-hazardous gas such as carbon dioxide may be a good choice. Being aware of the hazards of the acid or the base before using as neutralizing agent is essential in any operation.

Cost: Sulfuric Acid is the most commonly used acid because it is less costly and more effective than other acids and can be purchased in concentrations ranging from very dilute solutions up to 98 percent. High concentrations of acid in large drums are less expensive than paying for a drum of 50 percent sulfuric where some of the cost is for water. However, the health and safety risk is higher when using high concentrated forms of the chemical.

Storage: The physical properties of the selected reagent must be considered carefully as well. Many avoid the most common base 50 percent sodium hydroxide because it begins to freeze at temperatures below 60 degrees Fahrenheit, and is a liquid, opting for calcium carbonate that may be purchased as a solid form (limestone). Outgassing is a big problem with hydrochloric acid and at the same time it's very corrosive so it must be set up carefully with proper ventilation.

A portion of the information above is used with permission from the Digital Analysis Corporation.

Sampling for selected phthalates and benzyl alcohol in the Lower Duwamish Basin

Because of recontamination concerns for Lower Duwamish waterway sediments, from 2003 to 2006 the County sampled industrial dischargers, wastewater pump stations and its two large wastewater treatment plants to evaluate if there are locations in its sewer system where benzyl alcohol, benzyl butyl phthalate, and bis-(2-ethylhexyl) phthalate appear in greater amounts and if there are controllable sources of these chemicals.

The study conclusions indicate that because these chemicals are commonly found in the urban environment, treatment of industrial sources alone will not be able to overcome the amounts of the chemicals coming from domestic (i.e., residential) sources that are not regulated by KCIW.

Because some industries do tend to have higher concentrations of the chemicals than others, KCIW has made pretreatment recommendations for these types of facilities. These include: larger commercial laundries;



food processing facilities and barrel cleaning, container washing and pressure washing facilities.

To read an article about the study or to download the study itself, or to inquire about the study, go to <http://dnr.metrokc.gov/wlr/indwaste/duwamish.htm>

KCIW facts and highlights for 2007:

Protecting water quality is a sound business investment – and one that supports our mission of creating resources from wastewater.

KCIW:

Regulated approximately 600 facilities that discharged nearly 1.4 billion gallons of industrial wastewater into the sewage system.

Administered wastewater discharge approvals: 128 permits; 310 discharge authorizations; 171 Letters of Authorization.

Completed 405 inspections.

Collected 2,279 discrete compliance samples.

Issued notices of violations to 29 companies for 58 violations.

Investigated three incidents detected at county treatment plants.

The county treatment plants:

- Did not have any National Pollutant Discharge Elimination System (NPDES) program exceptions.
- Processed biosolids with metal concentrations continuing to meet the strictest U.S. Environmental Protection Agency standards.

Thank you! KCIW thanks county industries and other facilities for working with our program to effectively manage their industrial wastewater discharges throughout 2007.

Split Sample Chain-of-Custody forms coming soon

A split sample is a single sample divided into two separate samples, with each prepared and analyzed independently as an indication of analytical variability and comparability.

KCIW is developing a Split Sample Chain-of-Custody form. This will help facilities track and coordinate information with the program.

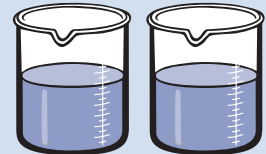
The KCIW Sampling and Monitoring Team will use the form to document the collection and transfer of samples shared with permittees.

The form will include the following information:

- Sample collection dates/times
- Number and types of samples
- Corresponding IW sample numbers
- Preservation measures (if applicable)

The program anticipates that the form will be in full use by the third quarter of 2008.

For more information contact KCIW Lead Compliance Specialist Greg Newborn by e-mailing: greg.newborn@kingcounty.gov or by calling 206-263-3022.



Recent enforcement actions

King County's Industrial Waste Program is responsible for making sure that water used by county industries returns to our waterways clean and safe. This protects our water resources, our public health, workers at treatment plants and the biosolids produced there.

Most businesses in King County do an excellent job of meeting this clean water goal by treating their industrial wastewater before they discharge it to the sewer. Whenever possible, we work to provide technical assistance and help industries reach compliance before enforcement actions become necessary. If companies violate clean water standards, however, we do take enforcement actions, as federal regulations require.

The following companies are users of the county sewer system that violated treatment requirements from February - March 2008, or have not had their violations previously published. They were found in significant noncompliance during the reporting period; received fines; had violations that were unique or warranted special attention; or met a combination of those actions.

Northwest Gourmet Food Products Inc., Seattle

Nature of Violation/Type of Pollutant: Reporting violation.

Basis for Publication: Northwest Gourmet Food Products Inc. had a violation warranting a fine.

Comment: Northwest Gourmet Food Products Inc. was late in filing an application for a waste discharge permit.

Penalty: A \$500 fine for filing its application more than five days past the deadline mandated by the final notice.

Other Enforcement Actions: King County Industrial Waste also acted on 14 other violations at four companies for the following parameters: copper (4); permit violations (7); reporting-late self-monitoring reports (3).

We all need to work together to prevent pollution.

If you have information for the Industrial Waste Program or questions about our programs, please call 206-263-3032 or TTY Relay: 711. You may also visit our program's pages at <http://dnr.metrokc.gov/wlr/indwaste/index.htm>



King County

Department of Natural Resources and Parks

Industrial Waste Program

130 Nickerson Street, Suite 200

Seattle, WA 98109-1658

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RETURN SERVICE REQUESTED

Commitment-to-Compliance winner BP Products North America Inc.

With five years of excellence in pretreatment to win KCIW's Commitment-to-Compliance award, this facility takes impressive measures to prevent pollution. The bulk fuel terminal, located on Seattle's Harbor Island, receives gas and diesel fuel and stores it before it is trucked out. The company takes residual water from the bottom of storage tanks and extensively filters it prior to discharging into the county's sewer system. With built-in secondary containment, the facility also works closely with City of Seattle on stormwater drainage. Terminal Manager Sammy Makalena says, "We are just doing our job and protecting the environment."

Congratulations BP Products North America!

*BP staff receive KCIW's Commitment-to-Compliance award.
L. to r.: Sammy Makalena, terminal manager; Jerry Charlshe,
engineer and Barbara Badger, KCIW compliance investigator.*



Creating Resources from Wastewater